

### **Remarks and Arguments**

Claims 2, 4, 7-12, 14, 16 and 18-22 have been presented for examination. By this amendment, claims 5-7 have been canceled, claims 2, 4, 8-11, 16 and 18-21 have been amended. As a result, claims 2, 4, 8-12, 14, 16 and 18-22 remain in the application with claims 4, 16 and 18-21 being independent claims. Applicant respectfully submits that no new matter has been added.

### **Objections to the Claims**

Claims 2 and 14 stand objected to because these claims are dependent, respectively, on independent claims 4 and 16. The Examiner maintains that this is improper because a claim must be dependent upon a preceding claim.

Applicant respectfully submits that claims 2 and 14 were previously amended to depend on an independent claim that, in the sequence of claims, does not numerically precede it. Applicant respectfully submits, however, that this is a temporary situation and one that would be corrected when the application issues and the claims are renumbered. Applicant respectfully submits that no correction is required at this time and the objection should be withdrawn.

### **Rejections under 35 U.S.C. § 112**

Claims 2, 5 and 7-11 stand rejected under 35 U.S.C. § 112, second paragraph. By the canceling of claim 7 and the amendments to claims 8-11 to correct for the dependency, Applicant respectfully submits that the rejection as to claims 8-11 has been overcome.

Claim 5 has been canceled and claim 2 has been amended to correct for the lack of antecedent basis as pointed out by the Examiner.

Applicant respectfully submits that all claims are now in compliance with 35 U.S.C. § 112 and requests that this rejection be withdrawn.

## **Rejections under 35 U.S.C. § 102**

Claims 2, 4-12, 14, 16 and 18-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Gasser, U.S. Patent 5,220,604 (hereinafter "Gasser"). Applicant respectfully traverses this rejection as set forth below.

In accordance with the principles of the invention, a method and system is disclosed for evaluating a set of credentials. Each credential explicitly includes a trust rating that represents a level of confidence in information being certified within the respective credential. Within any given certification path formed by the set of credentials, such as identity certificates, group membership certificates, group non-membership certificates and group membership lists, a composite trust rating for the respective path is determined to be the lowest trust rating of any credential in the relevant path. In the event plural certification paths exist within the set of credentials, the composite trust level for each certification path is established as described above, i.e., set to the lowest trust rating of any credential in the respective certification path, and an overall trust rating for the set of credentials is determined to be the highest composite trust rating among the various certification paths. Access to a resource is granted in the event the highest composite trust rating, whether determined from plural certification paths or just one, satisfies predetermined criteria.

Gasser is directed to a method for controlling access to a system resource by providing an access control list for each system resource. The access control list contains a list of all possible access privileges and the users that have these privileges. When the user requests access and that user's name is not found on the resource's control list then access is denied. (Column 4, lines 46-54.) As part of the determination as to whether or not to grant access, a user must authenticate itself, i.e., it must prove that it is who it says it is, prior to a determination as to whether or not the user has access to the resource. Gasser discloses the process, as already known in the art, of using public and private keys to authenticate a user's identity. As part of this authentication, certifying authorities are used in conjunction with stored "certificates" that are encoded by the certifying authority so as to affirm a user's authenticity. These are often referred to as trusted certifying authorities. Further, Gasser discloses that in large networks there may be more than one certifying authority in order to ease the

congestion that might occur if there is only one certifying authority. As a result, a network or chain of certifying authorities is established where one is certified by a next and the entire chain is trusted. (Column 8, line 32 – Column 9, line 15.)

Further, Gasser discloses that the contents of an authentication certificate contain the name of a principal, its public key and a time period of validity. When multiple certifying authorities are used, the certificates may also contain the names of the certifying authority. In addition, a time period of validity is included with the authentication certificate. (Column 9, lines 49-64.)

In contrast, claim 4, as amended and as representative of the independent claims, recites a method for evaluating certifying credentials comprising at least one group credential, in response to a request to access a resource and includes ascertaining at least one first trust rating explicitly included within at least one of the credentials within the set of credentials. The first trust rating of a credential represents a level of confidence in the information being certified within the respective credential. In the event that the set of credentials comprises a plurality of certification paths where each certification path is a plurality of credentials, a third trust rating for a respective certification path is set equal to a lowest first trust rating in the credentials of the respective certification path. In the event that the set of credentials does not comprise a plurality of certification paths, a second trust rating is set to be a lowest first trust rating of the at least one first trust ratings. Alternately, in the event that the set of credentials comprises a plurality of certification paths, the second trust rating for the set of credentials is set to a highest third trust rating of the third trust ratings. Access to the resource is granted in the event that the second trust rating satisfies predetermined criteria.

In order for a reference to anticipate a claim, each and every limitation of the claim must be found in the cited reference. Applicant respectfully submits that Gasser does not anticipate that which is recited in independent claim 4 for at least the reasons that there is no disclosure of a first trust rating explicitly recited in each credential where the first trust rating represents a level of confidence in the information being certified by the respective credential. Further, an overall level of trust, i.e., the second trust rating, for a set of credentials is not based upon a lowest trust rating from the certificates when

there is no plurality of certification paths or, when there is a plurality of certification paths, based on the lowest trust rating of a certification path, i.e., the third trust rating, as set forth in claim 4.

Gasser discloses a hierarchy of certification authorities where authentication is based on the "chaining" of certifications. If there is a break in the chain, according to Gasser, then the authentication fails and, therefore, it is most likely that access to the resource will not be granted. There is no disclosure in Gasser, however, that each credential has "explicitly included," within it a rating as to the level of confidence in the information being certified therein.

The Examiner maintains that "the trust rating is interpreted as the presence or absence of membership in a group." This interpretation as to "trust rating" in the claims is improper as it is clearly recited that the first trust rating qualifies a level of confidence for each credential.

For at least the foregoing reasons, Applicant respectfully submits that independent claim 4 is not anticipated by the Gasser reference.

Claims 2 and 8-12 depend, either directly or indirectly, on amended claim 4. These claims, therefore, incorporate the limitations of claim 4 and patentably distinguish over the Gasser reference in the same manner as amended claim 4. Accordingly, Applicant respectfully submits that these claims are also allowable.

Independent claims 16 and 18-21 have been amended in a manner similar to the amendments to claim 4, as described above. Independent claim 18 is directed to a computer program product comprising program code to operate a method similar to the method of claim 4. Independent claim 19 is directed to a computer data signal including a computer program that also implements a method along the lines of that which is recited in independent claim 4. Independent claim 20 is directed to a system for evaluating a set of credentials and comprises means for storing an access control program and means for executing the access control program. The access control program includes program code for executing a method along the lines as recited in claim 4. Independent claim 21 is directed to a method for evaluating a set of credentials comprising at least one group credential in response to a group request to access a

resource and implements a method similar to that which is recited in independent claim 4.

For at least the reasons cited above with respect to independent claim 4, Applicant respectfully submits that independent claims 18, 19, 20 and 21 are not anticipated by the Gasser reference. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

As dependent claim 22 depends from independent claim 21, it incorporates the limitation of claim 21, and for the same reasons as submitted above, is also patentable over the cited reference.

In light of the forgoing amendments and remarks, this application is now believed to be in condition for allowance and a notice of allowance is earnestly solicited. If the examiner has any further questions regarding this amendment, he is invited to call applicant's attorney at the number listed below. The examiner is hereby authorized to charge any fees or direct any payment under 37 C.F.R. §§1.17, 1.16 to Deposit Account number 02-3038.

Respectfully submitted,



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